

Application No.: 10/031,981

Docket No.: AP9678

AMENDMENTS TO THE SPECIFICATION

Beginning on page 9, the first and second paragraphs under the Detailed Description of the Preferred Embodiments:

The brake system illustrated in Figure 1 is basically comprised of a brake pressure generator unit 2 that is operable by an actuating pedal 1 and has a first hydraulic chamber 3 which houses a first piston 4 with a central valve 5 and to which is assigned an elastic means, preferably a spring 6. By way of a first hydraulic line 7, the first hydraulic chamber 3 is connected to the wheel brakes 8, 9, 10, 11 associated with which are rotational speed sensors 12, 13, 14, 15 in this embodiment. Inserted into the first hydraulic line 7 is a pump which is configured as a bidirectional pump 16' herein and operated by a motor 17, and in parallel to which a non-return valve 18 is connected by way of a second hydraulic line 19. Further, the system includes a pressure fluid supply reservoir 20. For comprehending the present invention, further control valves for brake pressure control, as they are e.g. provided in an [[ABS]]Anti-Lock Brake System (ABS) device, [[or]] an Electronic Stability Program (ESP) [[ESP]] device, or a Traction control System (TCS) are not absolutely necessary and have been omitted.

When the actuating pedal 1 is depressed, a force is applied to the piston 4, thereby generating a pressure in the first hydraulic chamber 3. The pressure fluid flows out of the first hydraulic chamber 3 via the connected hydraulic line 7 to the pump 16'. When the pump 16' is switched on, i.e., when the motor 17 is energized by a control device not shown in Figure 1, it drives the pump 16'. With the help of pump 16', the inlet pressure is boosted and conducted from the outlet side of the pump 16' to the wheel brakes 8, 9, 10, 11 by way of the second line 19. In case the pump 16' is ineffective, the pressure generated in the pressure generator unit 2 can be applied directly to the wheel brakes 8, 9, 10, 11. This ensures an auxiliary braking function. It is arranged for that the motor [[18]]17 drives the pump 16' only when there is need. This may be done by a corresponding gearbox if the motor 17 is constantly running. With the exception of brake operations that require boosting, it is also possible to activate the motor 17 only when the wheel brakes 8, 9, 10, 11 shall be acted upon by brake pressure independently of the driver's request and, thus, of the brake pressure generator unit, for example, in the case of a TCS or ESP control intervention. A corresponding design of the central valve 5 renders it possible in the event of a TCS or ESP control intervention to have pressure fluid aspirated by the

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pump 16' from the pressure fluid supply reservoir 20 by way of the central valve 5 and the first hydraulic chamber 3 and to supply it to the wheel brakes 8, 9, 10, 11. For a reduction of brake pressure, the bidirectionally operating pump 16' illustrated in Figure 1 is reversed in its direction of operation and will then deliver pressure fluid from the wheel brakes 8, 9, 10, 11 in the direction of the pressure generator unit 2. The pressure fluid may finally propagate by way of the central valve 5 until the pressure fluid supply reservoir 20.

Beginning on page 13, the first full paragraph:

In Figure 5, an embodiment of the present invention is illustrated wherein the brake pressure generator unit 2 has a tandem master cylinder 36 that is operable by the brake pedal and basically includes two pressure chambers, i.e., a first master cylinder chamber 39 and a second master cylinder chamber 40, which are separated from each other by a first master cylinder piston 37 and a second master cylinder piston 38. Each master cylinder piston 37, 38 includes a central valve 41, 42. The operation of tandem master cylinders 36 of this type is not explained in detail in the present context because it is well known to the expert skilled in the respective art. A direct application of the wheel brakes 8, 9, 10, 11 by means of the pressure produced in the two brake circuits of the tandem master cylinder 36 takes place especially in emergency situations, that means in the event of failure of pump 16 or motor 17. By way of an eighth hydraulic line 43, the first master cylinder pressure chamber 39 is connected to the second hydraulic piston chamber 44 which is isolated from the first hydraulic chamber 3 that houses the elastic means 6 by the separating piston 64 (see Figure 6) which includes a central valve 65. Thus, the separating piston 64 effects a hydraulic separation of the two tandem master brake cylinder circuits from a third brake circuit, wherein the first hydraulic chamber 3 is connected to the energy supply by the pump 16, to the connection to the pressure fluid supply reservoir 20 by way of preferably the central valve 65 (see Figure 6), and to the rear-wheel brakes 10, 11 by way of normally open valves 47, 48, and is connectable to the front-wheel brakes 8, 9 of the vehicle by way of preferably normally closed valves 45, 46. In Figure 5, the corresponding valves are shown which permit an ABS/TCS control of the brake pressure. The inlet valves 45, 46, 47, 48 which are inserted into the line portions 7a, 7b, 7c, 7d leading to the individual wheel brakes 8, 9, 10, 11 and succeeding the ~~first~~ second-line 7, and the outlet valves 50, 51, 52, 53 which are arranged in the line portions 49a, 49b, 49c, 49d of a ninth line 49 leading away from the wheel brakes 8, 9, 10, 11 are used for this purpose. From the pressure chambers of the first master cylinder 39 and

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second master cylinder 40, a tenth and an eleventh hydraulic line 54 and 55 lead to the wheel brakes 8 and 9 which are closable by way of valves 56 and 57.